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A FRAMEWORK FOR FOOD AND AGRICULTURAL POLICY IN THE 1980s

John E. Lee, Jr.

The thesis of this article is that food and agricultural policy in the 1980s will be shaped by emerging economic, social, and political realities that are different from the realities which gave rise to policies and programs of the 1920s, 1930s, and 1940s and which, modified, continued through the 1970s. The characteristics of this new policy environment include:

- A changed economic structure and character of United States agriculture, and thus a changed constituency with changed policy needs.
- The internationalization of U.S. agriculture with its favorable and unfavorable implications, but which imposes certain constraints and disciplines on domestic agricultural and food policy.
- The prospect of a new supply and demand "equilibrium" and the end of 60 years of adjustment to supply growing faster than demand.
- The new, broadened context within which agricultural policies and programs must be considered.

THE CHANGING ECONOMIC STRUCTURE OF AGRICULTURE

Much has been written and said about "structure" in the past few years. The "facts" are so well known that they have become a sort of economic catechism. The commonly cited structural changes include fewer and larger farm firms, increasing concentration of production, changing patterns of land tenure, growing concentration and "thinness" in both factor and product markets, and burgeoning capital requirements with an increasingly complex financial structure.

Today 50,000 farms produce 40 percent of the total value of all farm output, 125,000 produce about half, and about 800,000 farms produce more than 90 percent. Thus, of the approximately 2.3 million farms today, about 1.5 million together produce less than 10 percent of the value of all farm output (Schertz et al.;

USDA, Sept. 1979a). The trends toward concentration are still underway. Recent projections suggest that by the year 2000, 75,000 farms will produce half of all farm output (Lin). For some commodities, most of the production will be controlled by a handful of large producers, whereas the more basic commodities (particularly those for which product differentiation is difficult and vast acreages are required) such as wheat and corn will continue to be produced by a relatively large number of producers.

Generally those farms with sales of \$100,000 or more (there are 187,000 of them and they account for well over half of all production) have income levels and returns to investment which compare favorably with those of nonfarm businesses and investment. As a group, the operators are financially strong and realize large increases in wealth from asset appreciation (Lins). However, they are likely to be growth oriented and highly debt leveraged, and thus to have a stake in a reasonable stability of prices and cash flows.

This operator of the average farm with \$20,000 sales and less receives most of his income from nonfarm sources. Mean total incomes for this group exceed the median incomes for nonfarm families. Nevertheless, a subset of small-farm operators within this group are genuinely poor; others may have legitimate public policy needs not now served by farm programs.

Between these two groups are operators of moderate-size farms, those with sales of \$20,000 to \$100,000. They may be caught in the middle; most of their earnings come from farming but their farms are often too small to provide an adequate income. These farmers depend most heavily on traditional price and income support programs. They are declining in number and share of sales. Thus, the distribution of farms by sales class is increasingly bimodal. A few large producers provide most of the commercial farm output. A large number of small producers account for little product in the aggregate and their economic well-being is only tangentially related to agriculture and traditional farm programs.

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J. B. Penn declined coauthorship of the article, but many of the ideas were originally his. I merely embellished them. In any event, I appreciate his assistance and that of my other colleagues, especially Kenneth Clayton and James Johnson. Two anonymous reviewers also provided helpful critique.

Land Tenure

The trends in tenure and land ownership are not completely clear. Several economic forces are at work and their impacts are not all in the same direction. Appreciation in land values is increasing the attractiveness of land ownership, but the higher prices make it difficult for low equity or beginning farmers to become owner-operators. Operators of large farms who have low debt loads and high equity can outbid other would-be land purchasers and in fact are doing so. In recent years, between two-thirds and three-fourths of farm land sales have been additions to existing owner-operator units. The considerable leverage afforded these farmers by their high equity, combined with the strong attraction of land ownership as an inflation hedge, adds further upward pressure to land prices.¹

Land prices and land ownership and use patterns are also affected by tax and credit policies. In ways neither intended nor fully understood by policymakers, many of these policies have contributed to the trend to fewer and larger farms. The availability for many years of plentiful loan funds at low, often subsidized, interest rates has contributed to escalating land prices. Higher land prices make entry by beginning farmers and growth of small farms difficult (and adds an intensity to lobbying efforts for more liberal credit programs). These conditions combine with the distributional impacts of tax policies to cause a "selecting out" of those individuals and firms who can outbid others for land (and thereby further bid up land values). Not surprisingly, those favored by the selection process tend to be those with high incomes, including operators of large farms with high equity in land already owned.

Several recent federal tax provisions have the effect of discouraging land sales by present owners. When these developments are viewed in the context of trends in land acquisition by operators of farms already larger than average, concern emerges about the potential creation of a small "landed class." Indeed, 1 percent of farmland owners already own about 30 percent of all the farmland in the United States (USDA, Sept. 1979b).

All the developments mentioned could create a situation favoring increased separation of land ownership and land use. In other words, some persons could specialize in land ownership and in seeking the returns to the ownership function, whereas others might concentrate on being farm operators. Such tenure arrangements no longer carry the social stigma

they once did, and they do not imply economic disadvantage if the terms of trade (balance of economic power) between landowners and land users are equitable. Thus, the long-held value of the owner-operated family farm as a norm or structural goal could give way to economic pragmatism. (Incidentally, if the trend to more expensive and specialized equipment continues, there could be a movement to more equipment leasing by farmers.)

The potential for greater specialization in ownership of production assets versus use of asset services is consistent with developments in other sectors of the economy and a continuation of a long-established trend toward functions once performed by farmers (and thought to be inseparable from farming) being shifted to nonfarm specialists. Such developments naturally are accompanied by the emergence of new markets (for resource services) and, if those markets are sophisticated, by the emergence of intermediation processes and principals to facilitate the exchange between resource owners and the users of resource services. Again, there is nothing new in principle here. But an agriculture largely characterized by specialization in resource ownership (the landlord/ownership function) and use of resource services (the farm operator/entrepreneurial function) would be different in character from agriculture as we have known it. Furthermore, there would be significant implications for the objectives and clientele of public farm policies. As only one example, programs intended to improve farm incomes but whose benefits actually become capitalized into land values would need to be reevaluated if farm operators and landowners were generally not the same people.

Financial Structure

The financial and capital structure of agriculture is also very different from that of a few decades ago. The technology used today is more capital intensive and a growing proportion of total production inputs is purchased from off-farm suppliers. Thus the flow of funds needed to finance farm production has grown in relation to the value of output. Furthermore, a declining portion of the total financing needed comes from retained earnings, and a growing portion comes from borrowed funds.

Farm sector debt increased from \$12 billion in 1950 to an estimated \$158 billion on January 1, 1980. The aggregate value of farm assets has also grown dramatically, especially in the last decade. The ratio of debts to assets doubled between the late 1940s and the late

¹This is not an attempt to fully explain land prices. Moreover, the points made in this section are consistent with the results of recent studies (Melichar, Boehlje) which suggest that land prices have behaved very rationally and can be explained largely by the expected flow of returns, including operating returns (or rent) and appreciation.

1960s and stabilized in the 16 to 17 percent range in the 1970s (USDA, Nov. 1979a).

The fact that the use of borrowed funds has grown more rapidly than net farm income implies an increasing debt-carrying burden. The ratio of debt outstanding to net farm income rose considerably during the 1960s and 1970s. During the 1960s and early 1970s, debt outstanding was two to three times higher than net farm income. In the late 1970s, that ratio was in the four to one and five to one range.

The use of debt financing and the burden of farm debt are not evenly distributed among all farms, large and small. For example, overall ratio of debts to assets is about 17 percent. On small farms (sales of \$2,500 or less) that ratio is only about 5 percent, but it increases for larger farms and is more than 20 percent for all farms with sales of more than \$100,000.

Moreover, the distribution of off-farm income in relation to debt outstanding is important. In 1978—the latest year for which complete data are available—farm operators with sales of \$2,500 or less received nearly half the off-farm income to all farm families; yet these farmers owed less than 4 percent of the outstanding debt. At the other end of the scale, farm operators with sales of \$100,000 and more owed nearly 40 percent of all debt outstanding but received only 6 percent of all off-farm income. Farmers with sales of \$40,000 and more accounted for more than 70 percent of all debt and had only 14 percent of all off-farm income.

Clearly, operators of small and moderate-size farms finance more of their needs from internal sources which are augmented by large and growing amounts of off-farm income. The largest 20 percent of our farms produce more than 80 percent of the value of all farm products, incur about the same proportion of all production expenses, owe more than 70 percent of all outstanding farm debt, and must depend almost entirely on farm income to service that debt. Thus, the operators of these largest farms are most sensitive to costs of debt servicing and to changes in interest rates.

The aforementioned are but a few facets of the changing organization and structure of the farm sector. Moreover, we are learning that changes in structure are caused by complex interactions of forces, many of which are related directly or indirectly to policies and programs with stated objectives other than that of changing structure. These include:

—Tax policies and rules.

—Public credit policies and programs.

—Federal price and income policies, including commodity price support policies.

—Publicly funded research and technology development programs.

The article by Walker examines these forces in greater depth. The point here is that the structure of agriculture and therefore the clientele being addressed by public policies have changed gradually but nonetheless dramatically since the period that gave rise to most of our present policies and programs. The changed structure implies problems different from those which accompanied a different structure in an earlier era. To continue to treat the problems of today's agriculture with policies designed to fit an earlier structure is analogous to a physician treating a patient for an earlier illness. Moreover, persons charged with policy formulation are increasingly sensitive to unintended long-term effects and side effects of specific policy actions.

“Structure,” whatever it is interpreted to mean, has become a national issue. Most people agree that the issue is not likely to go away. Public debate over the issue has crystallized many long-lingering concerns that have been slowly converging over the years. There will be an increasing number of questions about tradeoffs between alternative structures and the *performance* of the food system in terms of equity (distribution of costs and benefits), food costs, efficiency of resource use, energy and environmental impacts, and other concerns.

It would be unrealistic to expect the emergence of a national consensus on an “ideal” structure of agriculture anytime soon. This is a value-laden issue, many of the values tracing to the beginning of the country itself. In part, the values and beliefs held are a function of the level of understanding of the factual causes and consequences of a given structure change.² Therefore good structure research and its effective dissemination are crucial. Perhaps it is not unrealistic to anticipate that in the 1981 deliberations on replacement legislation for the 1977 Food and Agricultural Act there will be increased sensitivity to structural biases in current programs or apparent in program proposals. In turn, this awareness may lead to attempts—or rhetoric—to make public farm and food policies more size-neutral in impact.

Finally, structure is not an issue that stands by itself. It must be viewed in terms of its interaction with other sets of economic forces at work on the farm sector.

²In other words, people may believe a given structure or structural change to be “good” because they presume certain desirable characteristics to be associated with that structure. However, if their presumptions are proved to be in error, their judgment of the “goodness” of that structure may be revised.

INTERDEPENDENCE WITH THE REST OF THE WORLD

The United States agricultural economy never was a completely closed economy. In fact, in its beginnings, agriculture in the New World was primarily geared to exports to Europe. However, the extent to which United States agriculture has become an interdependent part of an integrated world economy is a relatively recent phenomenon.

Again, the story is well known. The present level of agricultural exports far exceeds the most optimistic projections of only a few years ago. With large deficits in the nonagricultural trade balance, agricultural exports have become increasingly important to the country's balance of payments. Primarily through the agricultural trade linkage, weather and economic developments elsewhere in the world now affect us more directly and to a greater extent than ever before. Similarly, developments in United States agriculture and agricultural policy have major impacts on the strategy and behavior of other countries.

As is usually the case with increased economic interdependence, both benefits and costs are involved. The benefits associated with our becoming an integral part of a complex interrelated international food economy are obvious. Proceeds from agricultural exports help us to pay for our expensive and growing petroleum imports. Our deteriorating balance of payments, serious enough in recent years, would be significantly more serious were it not for our very large agricultural export earnings. These exports also provide a good market for the products of America's farmers and have contributed greatly to the improved prosperity of farmers in recent years. In addition, the economic activity resulting from these exports has strong multiplier effects throughout the economy.

This close linkage with the rest of the world also introduces elements of risk and uncertainty into our domestic food economy. For regions heavily dependent on the production of crops for exports—such as the Great Plains—the risk and uncertainty are transmitted to the entire economy. Further, the high degree of interrelatedness with the rest of the world's food economy reduces our degrees of freedom or at least brings some constraints and discipline to domestic policy.

THE "NEW EQUILIBRIUM"

A third development of major significance is related to growth in exports. That development is the transition from an agriculture characterized by excess resources and chronic

surpluses to one characterized by limits. The transition is still taking place, but a new era is imminent.

After a brief "golden age" in the early part of this century, the export markets for American grains collapsed following World War I. That development roughly marks the beginning of a long period of adjustment in United States agriculture. The characteristics of that adjustment came to be associated with what was termed "the farm problem," and included excess resources, excess production, depressed prices, and depressed returns and incomes for a farm sector composed of millions of small-farm operators, mostly poor, with inadequate access to credit and capital. Overall, the farm sector was depressed and disadvantaged in relation to other economic sectors. The situation was exacerbated by a continuing technological revolution in agricultural mechanization, chemicals, improved plant and livestock varieties and breeding—all of which kept production increasing faster than utilization. Concurrently, what was perhaps the greatest mass migration in history was underway as millions of people left the rural areas for the towns and cities.

The perception of agriculture as it was in the 1920s and 1930s gave rise to a whole body of conventional wisdoms on which several generations of agricultural economists were trained. Among them were the definitions of "the farm problem" itself, the "early adoptor" (or "the agricultural treadmill") paradox, the concept that agriculture's problems could be solved if we could but remove the excess resources, the view that farm incomes were low in part because farmers controlled too few resources, and a host of other notions. That perception also led us as a profession to become enthralled with developing and teaching farmers concepts and strategies of firm growth. The present concern with "structure" suggests those efforts were successful!

More important, the perception of agriculture as it was in the 1920s and 1930s gave rise to a complex set of policies and programs to *solve* the farm problem, ease *adjustment* to the problem, and to sustain incomes. These policies and programs, and the institutional structure which developed around them, have continued with some modifications to the present time. They are well known and are not re-viewed here.

Now there are growing indications that the 60-year period of adjustment and disequilibrium is about over. These indications suggest that excess resources and excess supplies in U.S. agriculture are no longer chronic and the need for public income and adjustment assistance to farmers may not be permanent. Consider the evidence.

Global production prospects suggest that increases in the future will come more slowly than those in the past.

- Much of the world's supply of readily available, relatively fertile cropland is already in use.
- Increases in food production will have to come largely from productivity gains.
- In the short run, productivity gains will have to come from accelerated adoption of current technology and expanded use of traditional yield-augmenting inputs.
- Energy-based inputs (fuel, fertilizer, chemicals) are likely to be much more costly, placing an even more severe strain on increasing food output in the world.

Global food demand shows strong growth prospects.

- Population growth worldwide is likely to be at a slower rate than in previous decades, but there will still be millions of new people to feed each year—another billion by the year 2000.
- Real economic growth in the industrialized world may be slow or even negative over the next year or two but will eventually recover and perhaps undergo a strong surge.
- In many developing countries there will be continued economic growth, abetting the shift toward livestock products in diets and partly counteracting any declines in feed-stuff demand in higher income countries.

On balance, to meet global food demand, nearly full use of the world's more productive and readily accessible farm lands will be required. This prospect alone suggests that agricultural prices will rise as more of the production must be coaxed from less productive and more expensive resources.

World agricultural trade will grow in importance.

- The potential for meeting the world's need for increased food supplies rests largely with a few major exporting countries.
- Established European and Japanese markets will continue to depend on imports.
- Rapidly expanding markets (middle income countries, oil exporting nations, high income areas of East Asia, and some centrally planned economies) will import more feed for their expanding livestock sectors.

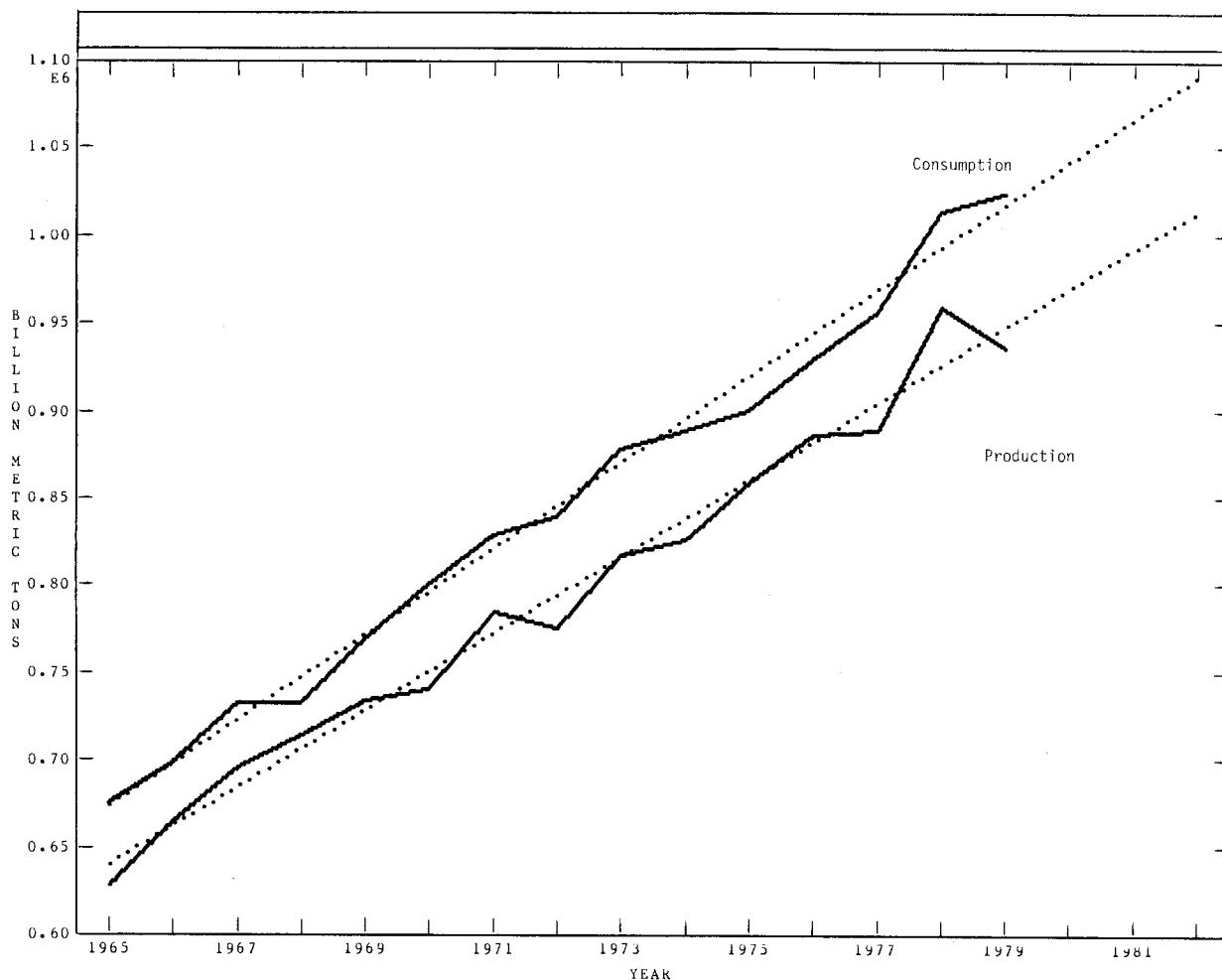
—Imports of the poorest countries are likely to be limited to basic food needs in years of production shortfalls.

Thus, the evidence suggests continued growth in demand for U.S. farm products in world markets. This prospect can be illustrated another way. In Figure 1, the top line represents the trend in annual world consumption of grain, excluding the U.S. and the USSR. The bottom line represents annual world production trends, again excluding the U.S. and the USSR. Both trends are upward sloping but consumption is growing faster than production. The shortfall is largely made up by purchases of U.S. grain. This illustration alone suggests that year after year the rest of the world is becoming increasingly dependent on the United States for its food supplies.

Against the international backdrop let us examine the domestic agricultural setting.

- There will be no acres idled under federal commodity programs in the 1980 crop year. In essence, most of our productive land now in farms is being utilized. Though we temporarily have a large supply of grains and soybeans because of loss of part of the Soviet market this year, growth in exports to the rest of the world has exceeded expectations. Even without the Soviet market in future years, meeting export demands is expected to require all the crop acreage now in production and will draw down stocks to more modest levels.
- Productivity growth appears to have slowed for both crops and livestock in recent years.
- With acres formerly idled now back in production and with continued growth in demand, especially for exports, we face the prospect of needing to add a few million acres of new cropland per year. The precise need will vary from year to year depending on yields, stocks, and the rate of demand growth.
- The supply of additional good cropland, readily available, may be very limited.
- Yield increases in the near term will be likely to come only through increased uses of energy-intensive fertilizers and pesticides. The dollar and environmental costs are potentially high.
- Expanded crop production could mean encroachment onto more fragile lands, raising the likelihood of erosion, loss of topsoil, pollution of streams, and even dust bowls.

FIGURE 1. TRENDS IN WORLD CONSUMPTION AND PRODUCTION OF GRAINS (EXCLUDING PRODUCTION AND CONSUMPTION FOR THE UNITED STATES AND THE USSR)



- Rising energy costs are likely to constrain expansion of irrigation, hence yields.
- Lucrative subsidies for alcohol fuel production from agricultural biomass could sharply increase the demand for grain and other agricultural feedstocks and increase competition for productive land.

The conditions outlined pose some interesting possibilities. Clearly, they imply a major focus on land, water, and energy use policies. That focus will probably be on two very different aspects of resource policies: how those policies *restrict production* and therefore limit our ability to meet domestic and foreign demands for food, and how continued expansion of production affects our *stewardship* of resource use. Again, these contrasting contrasting concerns pose difficult tradeoffs for public policy.

³The strong demand for grain and oilseeds may already be affecting the livestock industry in ways other than competition for feed grain. Since World War II, much of the growth in the beef herd has been in the eastern half of the country, much of it on land suitable for forage or row crops. With grain and soybean prices strong, livestock cannot compete for the land base. There is evidence of this shift. Though nationally cattle numbers have reached a cyclical low and are beginning to increase, cattle are still declining in number in the Southeast and North Central states. With grains competing strongly for the land base, the beef herd will grow more slowly than would otherwise be the case. This situation could serve to dampen the cattle cycle and bring more stability and possibly higher beef prices than would otherwise prevail.

We are so accustomed to having land idled by federal programs—land that could be shifted in or out of production by a change in the program rules or incentives—that we really do not know what the supply function for new cropland is once the program-idled acres are all back in production. Geographically, where is the new cropland? What will it produce? What less profitable crops will no longer be produced?

Significant increases to the cropland base will not come easily. Many economists believe that the supply function for land turns up sharply once the previously program-idled acres are all back into production and some forageland has been converted to rowcrop land. Others feel that millions of acres of new cropland could be added to the present base but that the productivity of those acres probably would be substantially below that of land now

in production. In either case, the supply function for additional grain and soybean production could become more inelastic at production levels significantly greater than those for 1979-80.

Let us suppose, for illustration, that after we have added another 10 to 15 million acres to the cropland base, demand continues to grow, but institutional, ownership, regulatory, and other constraints make it expensive to bring more cropland into production. The supply curve would turn up sharply, meaning sharply higher commodity prices are needed to bring more cropland into production. This situation could drive up domestic food prices, bring large windfall profits to current owners of highly productive land, and lead to more intensive use of fragile lands, thereby potentially damaging the future productive capacity of resources and contributing to environmental deterioration.

Such possibilities would lead consumers, conservationists, and others to raise serious questions about the wisdom of continuing a policy of maximizing exports, especially of unprocessed grains and oilseeds, when doing so implies exporting our topsoil, our limited phosphate supplies, and our groundwater (in essence, exporting our future productive capacity) while driving up domestic food prices and land values and possibly contributing to further consolidation of farms into fewer and larger units. Moreover, expansion of exports significantly beyond present levels will require large new investments in transportation, storage, and handling capacity.

In summary, for most of this century, United States agriculture has been going through an industrialization process during which technological advances kept production capacity growing faster than domestic demand plus exports. As the U.S. economy has become more intertwined with the international economy and as rising incomes have increased demand for food, especially livestock protein, faster than productive capacity in the rest of the world, that demand has absorbed most of this country's excess capacity. Thus, within the first half of the 1980s, the long period of adjustment and disequilibrium in U.S. agriculture with all its attendant problems (and associated policies, programs, and institutions) may phase into a new era of limits with all its attendant problems. Should that happen, the policies, programs, and institutions designed to address the problems associated with chronic surpluses and disequilibrium would not be appropriate.

Another point to ponder: if the misuse of resources and other problems due to maximizing exports while straining the limits of our productive capacity generate social costs too

great to ignore (loss of topsoil and other environmental problems, subsidized water, subsidized transportation systems, etc.) and if world demand for our farm products becomes highly inelastic, there could be increased interest in pricing our products to fully recover all private and social costs. This interest could arise both because the world's dependence on this country for food would allow us to get away with it, and because of growing concern for the long-term cost the country is incurring for the privilege of feeding the world. Realization of those costs could also spur stronger efforts to assist food deficit countries to improve their ability to feed themselves. Moreover, as terms of agricultural trade shift increasingly in favor of the United States, there would be increased internal pressure to export our commodities in more processed forms, including converting grain and oilseeds to pork and poultry products, to provide more domestic jobs and to capture more of the value added before the products are ultimately consumed.

Yet, there is something of a paradox in all of this. When it finally appears that the "farm problem" can be "solved," we not only have all the potential problems that attend the full utilization of our productive capacity, but also questions about *who ultimately reaps the benefits* of higher prices. The millions of modest-sized family farms that needed help 40 and 50 years ago are no longer there. Instead we are worrying about concentration of production and market power and about benefits being mostly distributed to those who need them least!

One other implication of the "new equilibrium" scenario outlined here is that the 1980s could be a very good decade for U.S. agriculture. Growing world demand and limits on additional productive acres could mean much higher grain and oilseed prices. With the cattle numbers at a cyclical low and with strong competition with row crops for the forage base, a slower expansion of cattle numbers than in previous cycles could keep cattle prices high. Other than concern about how the benefits of prosperity might be distributed, the major black cloud on the horizon is inflation. Depending on the sources and nature of inflation, substantial nominal gains may not translate into real income gains.

THE BROADENED POLICY CONTEXT AND CONSTITUENCY

Finally, three phenomena are having a major impact on the economic and political setting for food policy and though they are different they are sufficiently interrelated to be discussed together. They are:

- The broadened constituency for food policy.
- The growing realization of the need for a more integrative framework for bringing together more effectively the disparate components of food policy.
- The resulting gradual internalization into markets, policies, and institutions of costs and benefits once considered external to food policy.

Before Rachel Carson sensitized the public to some detrimental side effects of modern farm technology, before the Agribusiness Accountability Project made the question of who benefited from agricultural research and institutions a public issue, and as long as the real price of food was declining, agricultural policy was the domain of the "agricultural establishment." That establishment included primarily the major farm organizations, agribusiness interests, the USDA/Land Grant University institutions, and the "farm bloc" in Congress.

It is not feasible within the limits of this article to trace the events and processes that were part of the broadening of the food policy constituency. That has been done elsewhere (Paarlberg; USDA, Nov. 1979b, 1980). It is sufficient—and safe—simply to assert as a fact that the constituency of food policy is very broad today. Indicative of this broad constituency is the Department of Agriculture's Users Advisory Board which includes among its members, in addition to farmers and agribusiness representatives, representatives of consumers, nutrition interests, the poor, conservation and environmental interests, and small and minority farmers. Moreover, not all the academic representatives are from Land Grant schools! It is no longer sufficient to simply "tolerate" these nontraditional interests. They all have a legitimate stake in the workings of the food system.

The newer constituents have added to the traditional agricultural policy agenda a set of concerns that have become familiar over the past 10 years: environmental quality, dietary goals, nutrition for the poor and the vulnerable, distributive equity, and others. In addition there is growing awareness of the crucial importance of land and water policies to production capacity and to conservation of resources. Now, how the farm sector—indeed the entire food system—is organized and structured, and for whose benefit at whose expense, is a major policy issue.

At the same time that these complex issues are being added to the food policy agenda, there is a growing perception that addressing them on a piecemeal, ad hoc, or one-at-a-time basis is not satisfactory. One of the lessons de-

rived from the structure dialogue and from studies of past policies and programs is that many individual policies have side effects or long-term impacts not anticipated when the policies were instituted. Often these unanticipated effects are inconsistent with the original intent of those who framed the policies. Moreover, we are becoming aware that policies and programs interact in a kind of economic and institutional "chemistry" to bring about impacts neither intended nor fully understood.

For these and other reasons there is a growing tendency to examine the objectives of food policy and to treat the component parts within a common framework. The omnibus character of the Food and Agricultural Act of 1977 is evidence of this tendency. That legislation brings together many policies and programs previously treated in separate legislation. The debate on the 1981 legislation to replace the 1977 Act suggests that the new act will be even more comprehensive. In part this stems from the controversy over the structure of agriculture and an increasing awareness on the part of legislators that virtually every policy or program has structural implications. Although not yet well articulated, a tendency is emerging to ask about the objectives of food and agricultural policy and how the various public policies contribute to or affect those objectives.

Thus, we can begin to think of food policy in terms of a hierarchy of goals, including:

- Adequate supplies of safe and wholesome food, at reasonable prices.
- Food produced in a system that is efficient and which assures adequate rewards for all participants.
- Equitable distribution of power and well-being.
- Prudent use of resources, including energy.
- Environmental enhancement.
- Structure and organization of the food system consistent with the preceding goals and which preserves flexibility for the future.
- Food system structure consistent with other economic and national goals and policies.

Obviously, such goals will often be in conflict and tradeoffs will be required. That, of course, is the value of treating the components of food policy within a common framework. The conflicts and tradeoffs can be treated explicitly

and in a way to maximize complementarity among the multiple goals. To the extent that consensus can be reached on at least a rough ordering of the goals of food policy, priorities can be established when clear conflicts occur.

The third phenomenon emerges from the first two. The wider constituency of food policy forces recognition of a broader set of issues and eventually the internalizing of these concerns into the workings of the markets as well as into policies and programs. For example, all markets work within the context of a set of accepted rules, a point frequently overlooked in the debate over "free markets" versus government-regulated markets. Within whatever set of rules, a market functions to allocate resources and output. In the past when markets did not achieve results some persons considered desirable, it was common to say that the markets failed. More likely the problem was that the rules under which the markets functioned did not ensure recognition or "internalization" of the subject costs and benefits in the market process. In recent years the costs (environmental damage, subsidized water, etc.) previously external to the workings of the markets have been forced into the markets through changes in the rules. A conceptual framework for treating all the components of food policy not only can be a step toward ensuring that the multiple goals are internalized in the policies and programs that are part of the food policy, but also helps to identify the rule changes necessary to ensure that the costs and benefits treated within food-related markets are consistent with the societal objectives reflected in the food policy itself.

What Does it all mean?

None of the forces described here descended on us with dramatic suddenness. For the most part they are outgrowths of trends long underway—trends shaped by both public policies and market forces. But the net impacts of the convergence of these and other forces during the 1970s are nonetheless dramatic. Thus, we begin the 1980s with a situation in which:

- A small and declining number of producers account for most of the farm product and get most of the benefits of commodity programs.
- These producers are relatively large, have better incomes than most Americans, and earn a very attractive return on their investment.
- We could soon face the paradox of finally having achieved supply and demand equilibrium and better farm incomes but

with the realization that the beneficiaries are not the small, poor, and oppressed "family farms" characterized in the rhetoric justifying past policies and programs.

- Approximately 1.5 million farms produce little of the total value of farm output and their operators basically do not depend on farming for a living.
- Most of our good cropland is in production and the supply function for additional cropland is unknown but may be highly inelastic.
- The world grows daily more dependent on the United States for its food supply, meaning continued growth in demand and the possibility that after 60 years of painful adjustment to chronic oversupply we may be entering a period of sustained pressure on our resource base and our productive capacity.
- A broadened constituency is facilitating the internalization into food policy of issues and concerns once considered external to farm policy.
- A growing sensitivity to unintended side effects of interactions among disparate public policies and programs is contributing toward bringing those disparate pieces together within a more systematic food policy framework.

In view of these new realities many people are coming to realize that the old premises and perceptions which led to the farm policies of the past several decades are no longer valid. This realization is giving rise to challenges of the old institutions and to a fundamental and wide-ranging reexamination of present and alternative food and resource-related policies. Even some institutions long considered immune from public scrutiny and critique (including cooperatives and marketing orders) are now being challenged. Questions are being raised about the basic objectives of public food policies and programs. Who are the programs designed to help and why? These questions increase in persistence because, for example:

- In 1978, 200 million Americans paid more than a billion dollars in higher sugar prices to support a sugar program which transferred more than \$300 million additional income to some 16,000 beet and cane producers whose average income and wealth were greater than the average nonfarmer's.

- Under the 1978 farm commodity programs, almost half of the \$2 billion in deficiency payments was transferred from the Treasury (and taxpayers at large) to the largest 10 percent of the producers (Lin and Johnson).

As such questions increase in frequency and intensity, present and alternative policies may come to be evaluated in light of the criteria for justifying *any* public policy which directly or indirectly transfers rights or benefits from the common society to more defined or limited target groups. Those criteria suggest that any such shift must be justified to the public on grounds that it either:

- Improves the overall performance of the system, sector, or industry in question, thereby benefiting the common good, or
- The target group is one society views as

deserving special attention or benefit because of special circumstances such as poverty or past inequities.

Agricultural policies which reflect the changed reality described here, are formulated in the context of the hierarchy of objectives that constitutes a comprehensive food policy, and are subjected to the preceding criteria could be very different from past and current policies. This does not necessarily mean that in 1981 all the present policies and programs will be replaced with radically different ones. Policy changes tend to be incremental. Furthermore, not everyone will agree with the perception of agriculture reflected in this article. Finally, many of the provisions of present policy have proved workable and probably meet the conditions established here. It is likely nevertheless that in the 1980s more emphasis will be given to making the food system better serve the public good—defined more inclusively than ever before.

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